

From: [Kolosseus, Andrew \(ECY\)](#)
To: [Zell, Christopher](#); [Weiss, Leanne \(ECY\)](#)
Subject: Budd Inlet
Date: Tuesday, December 06, 2016 8:11:21 AM
Attachments: [image001.png](#)

Chris and Leanne:

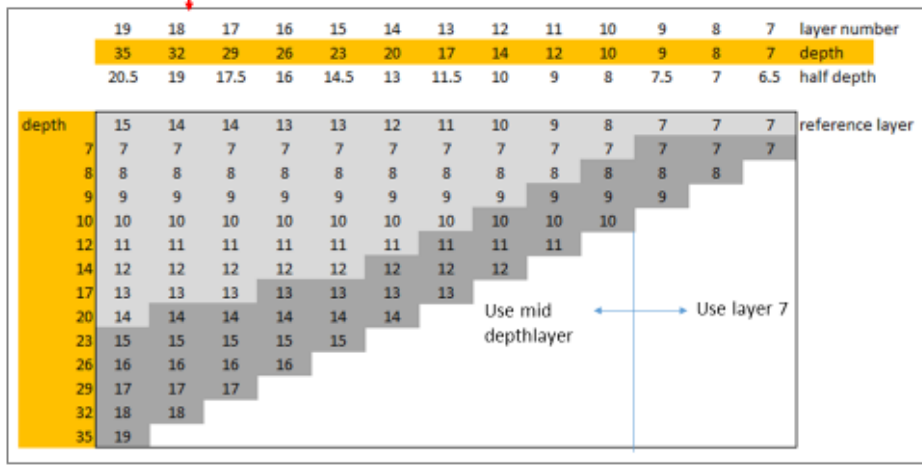
I made a couple of notes from last week's EPA-Ecology meeting on Budd Inlet / South Puget Sound. I wanted to make sure I heard correctly and that we remember where we ended up. Can you both take a look at this and let me know if this is correct?

1. EPA agreed that a phased TMDL that set an aggregated allocation at the boundary of Budd Inlet (even though we won't be able to tie it to individual WLA at the end of the pipe for WWTPs) was an acceptable use of the Phased TMDL option. We would need to be open about uncertainty and include schedules for everything, including a Puget Sound TMDL. (Note that Ecology would still need to get internal approval before using this approach).
2. EPA understands that there is not a "high" likelihood of solving the capitol lake problem (although there is a good opportunity) and there is no way to meet water quality standards without solving capitol lake problem. If this is the only shortcoming in a future Budd Inlet TMDL, EPA would be able to approve the TMDL.
3. We will have future conversations about (a) downstream standards and (b) aesthetic and other non-aquatic life uses.

And there was a brief mention of vertical averaging on the Puget Sound DO project. We're already doing this in Budd Inlet. Chris, please take a look at our approach – attached as a slide, below (let me know if it doesn't come through). Let us know asap if you have an issues with this approach. The basic idea is that model layer 7 has water in is 99.75% of the time (i.e. layer 7 is subtidal). Therefore, in areas of the model with 7, 8, or 9 layers we average layers 7 through 9. In deeper waters, we used the mid depth layers. It's the layers in the darker gray in the plot that we averaged. This approach was used for the slides from the November advisory committee meeting update that I sent to you earlier. If you have concerns or questions, we should add this to the future conversations in #3.

1. If $\frac{1}{2}$ depth < layer 7, use depth below layer 7
2. If $\frac{1}{2}$ depth > 7, use depth below half depth

1. Using water column depth below a layer that is more or less always submerged: **layer 7**



layer	% time surface layer	% time layer submerged
1	0	0
2	0.07	0.07
3	23.48	23.55
4	30.04	53.59
5	24.68	78.28
6	14.68	92.96
7	6.79	99.75
8	0.25	100.00
9	0	100.00
10	0	100.00
11	0	100.00
12	0	100.00
13	0	100.00
14	0	100.00
15	0	100.00
16	0	100.00
17	0	100.00
18	0	100.00
19	0	100.00

Andrew Kolosseus
 Washington State Dept. of Ecology
 PO Box 47775
 Olympia, WA 98504-7775
 (360) 407-7543